

FIG. 1
PRIOR ART

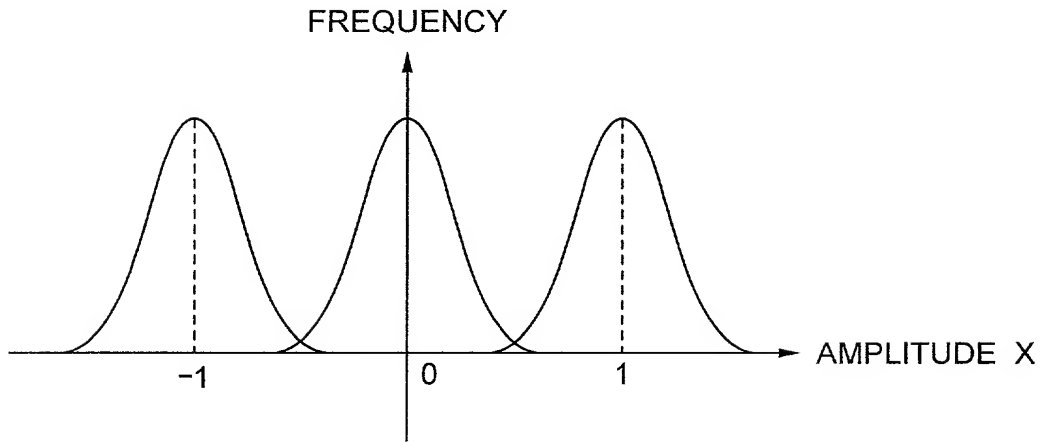


FIG. 2
PRIOR ART

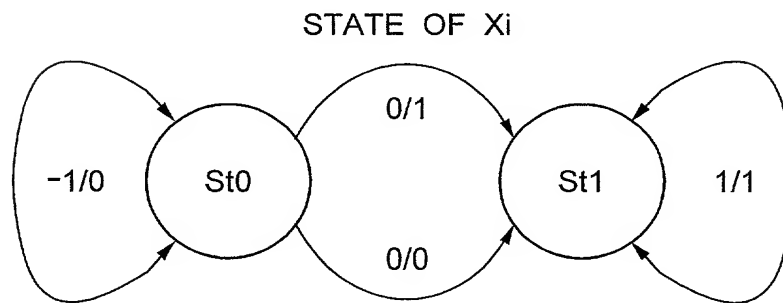


FIG. 3
PRIOR ART

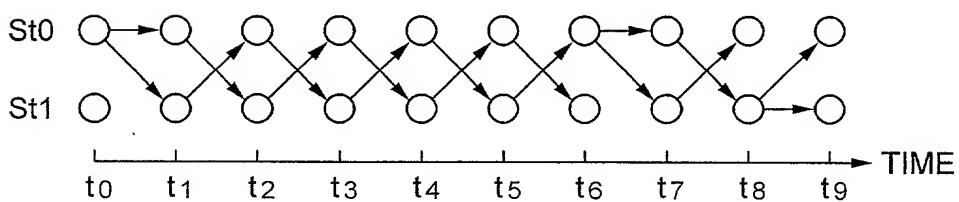


FIG. 4

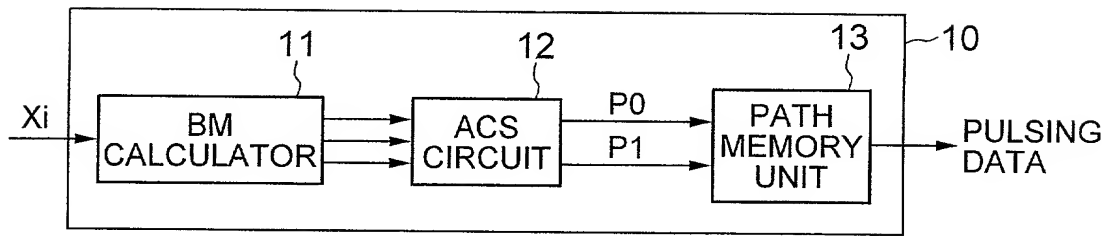


FIG. 5

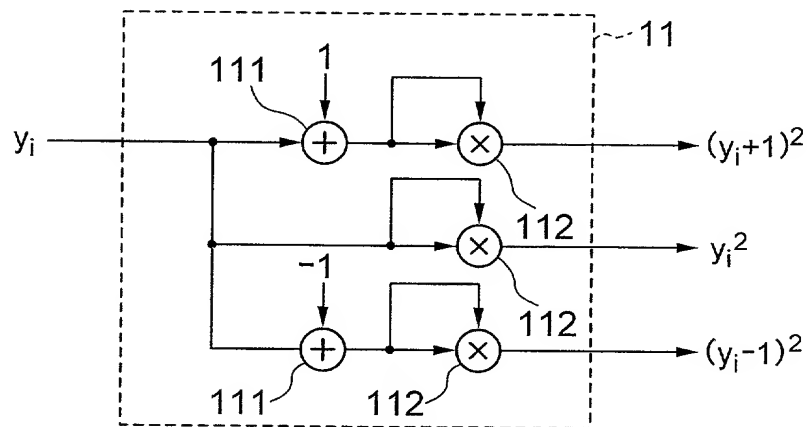


FIG. 6

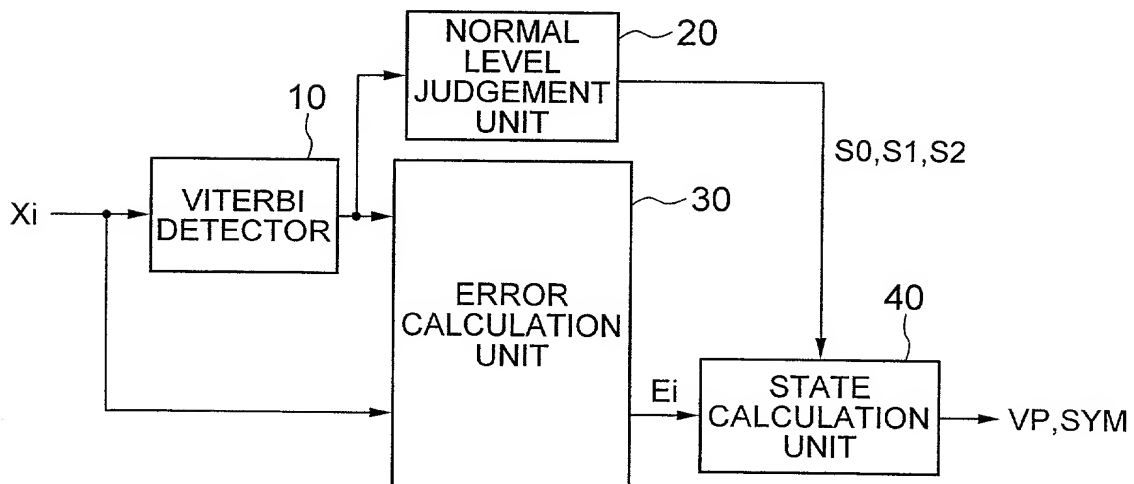


FIG. 7

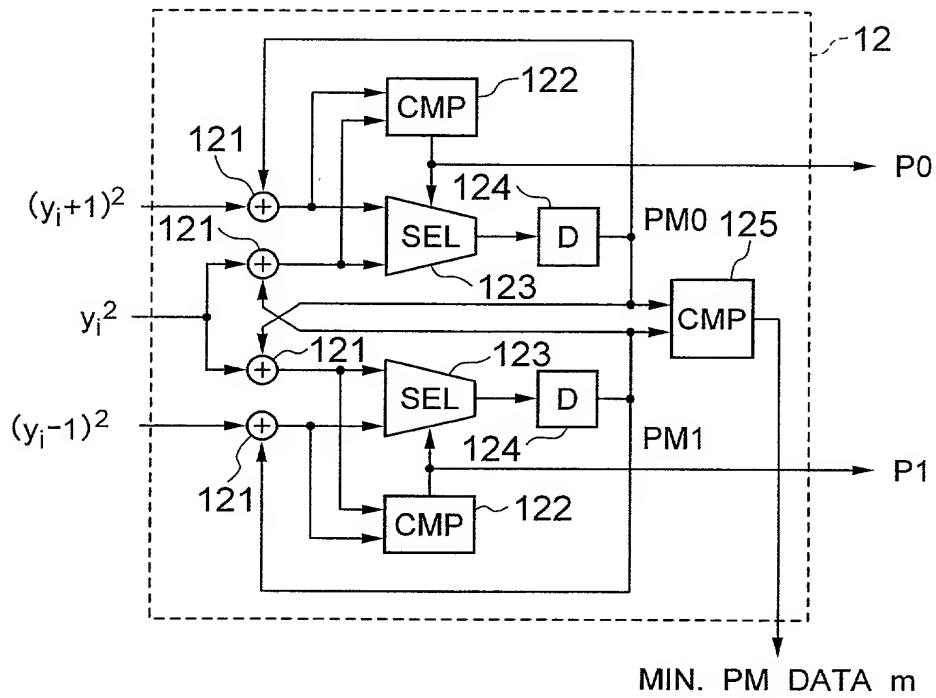


FIG. 8

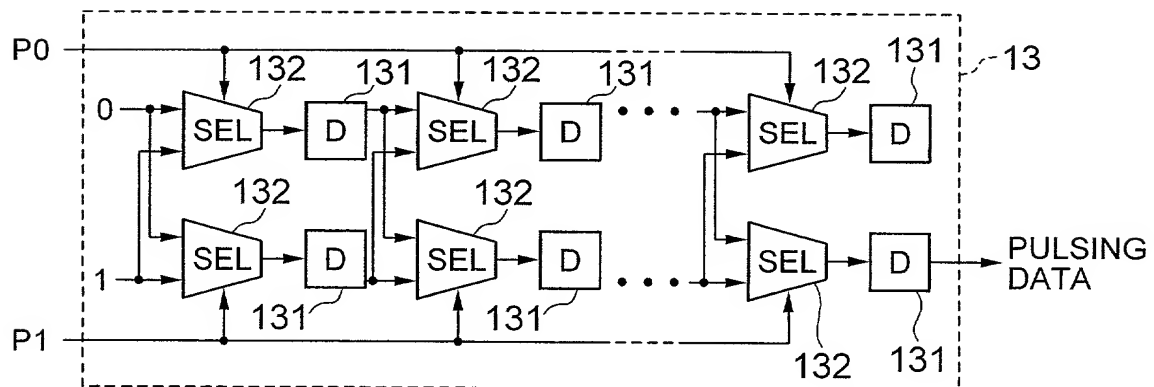


FIG. 9

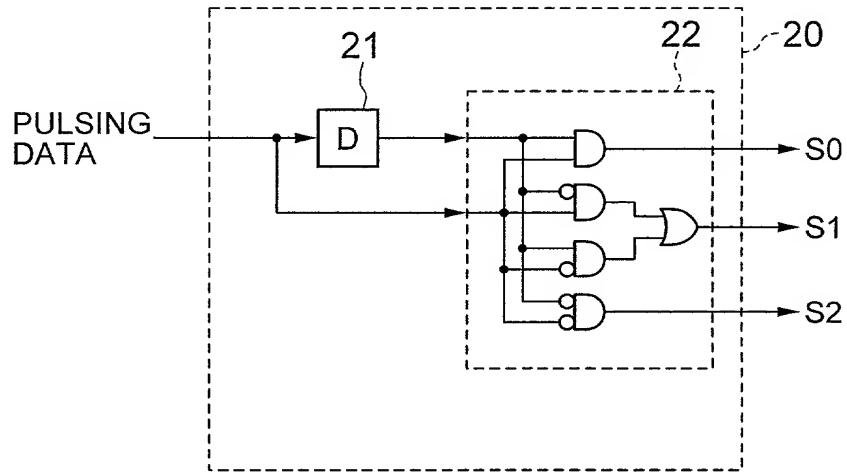


FIG. 10

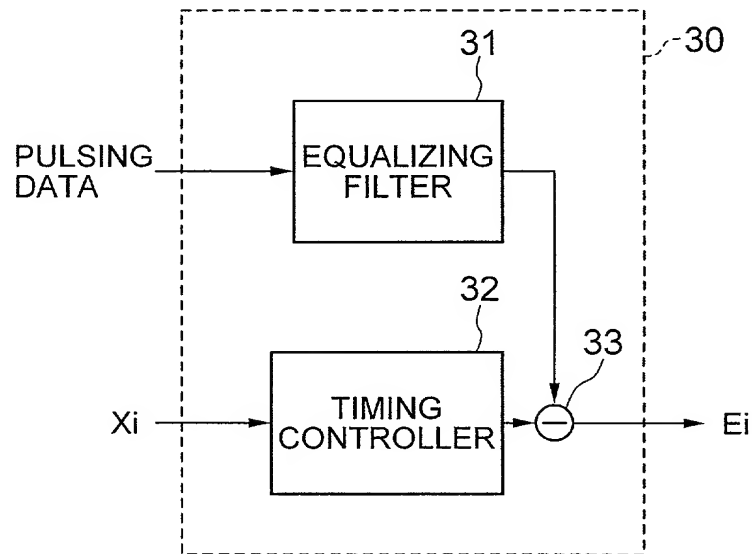


FIG. 11

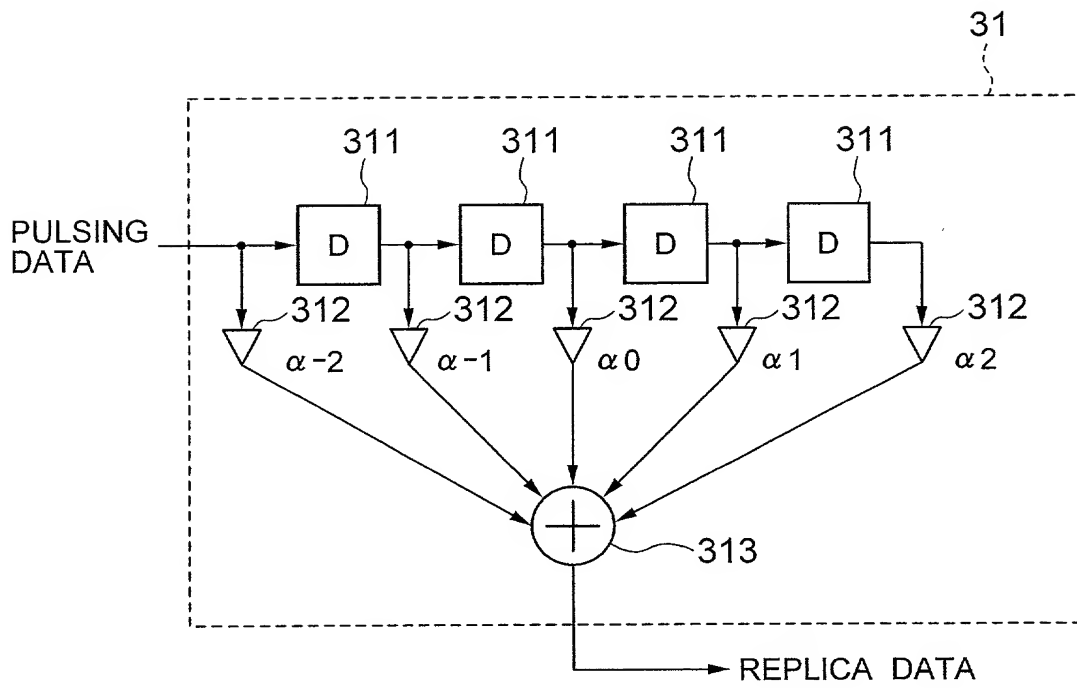


FIG. 12

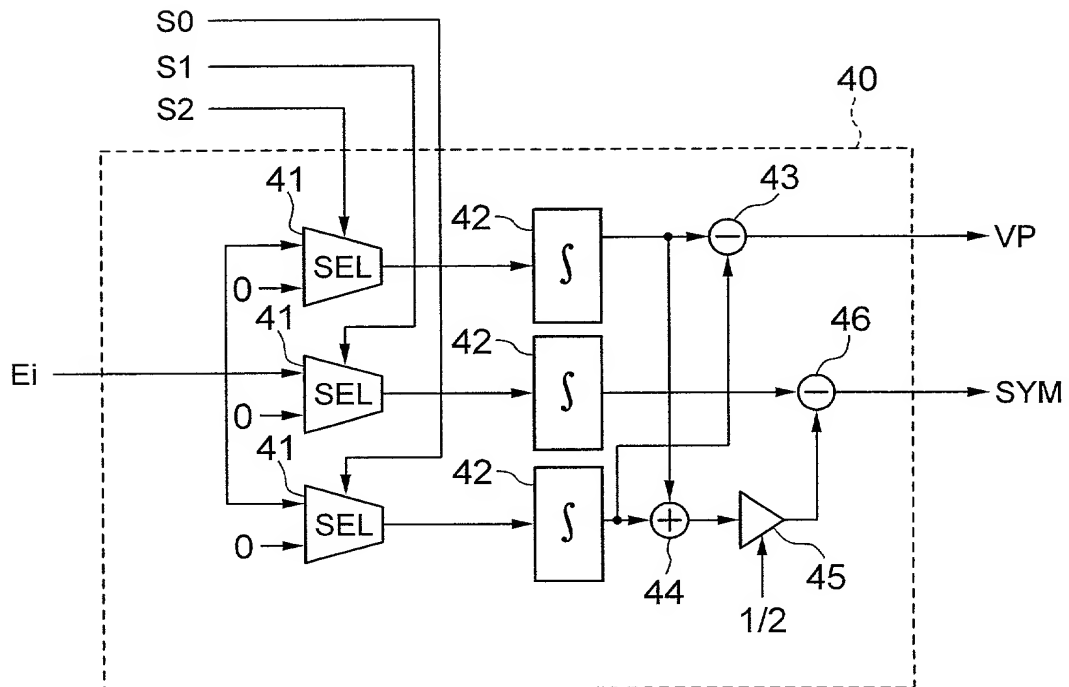


FIG. 13

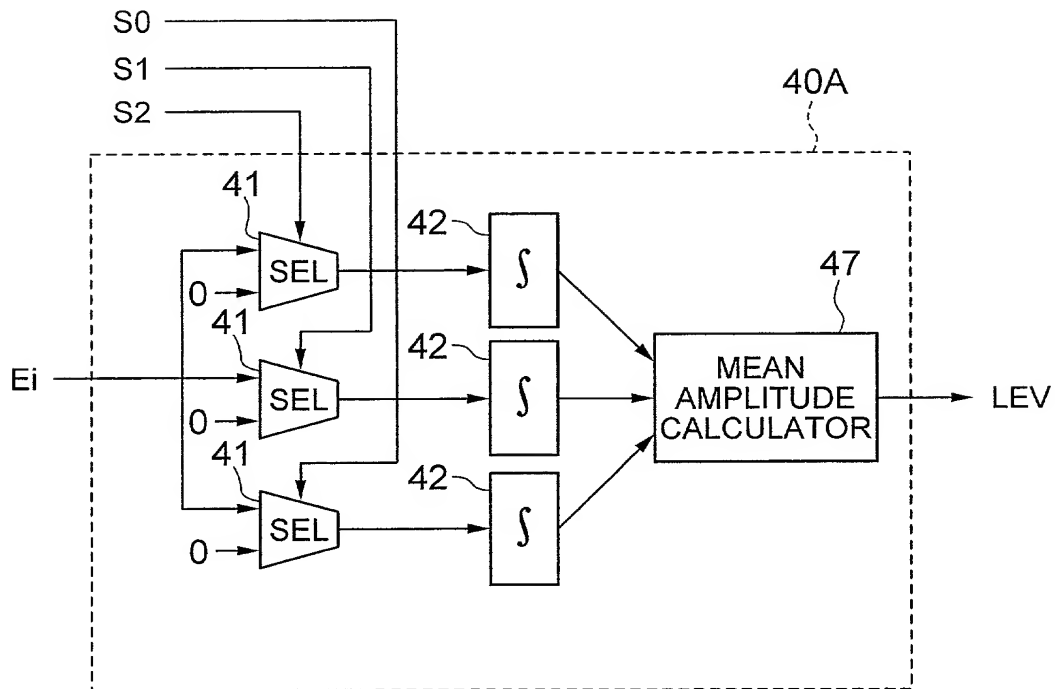
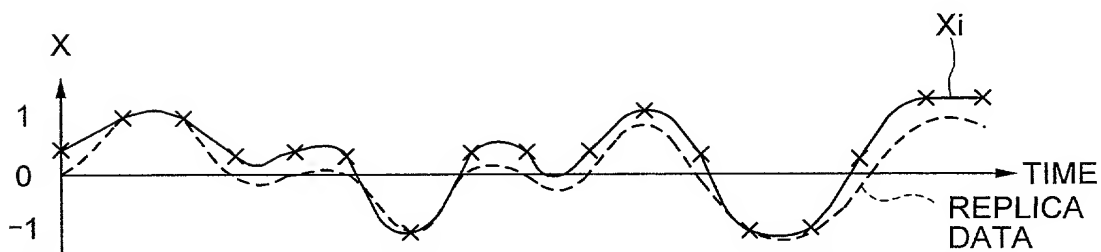


FIG. 14



X_i	0.2	1.2	1.2	0.3	0.3	0.2	-0.8	0.2	0.8	0.2	1.3	0.2	-0.9	-0.8	0.2	1.2	1.2
E_i	0.2	0.2	0.2	0.3	0.3	0.2	0.2	0.2	0.3	0.2	0.3	0.2	0.1	0.2	0.2	0.2	0.2
S_n	0	1	1	0	0	0	-1	0	0	0	1	0	-1	-1	0	1	1
S_0	1	0	0	1	1	1	0	1	1	1	0	1	0	0	1	0	0
S_1	0	1	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0
S_2	0	0	0	0	0	0	1	0	0	0	0	0	1	1	0	1	1

FIG. 15

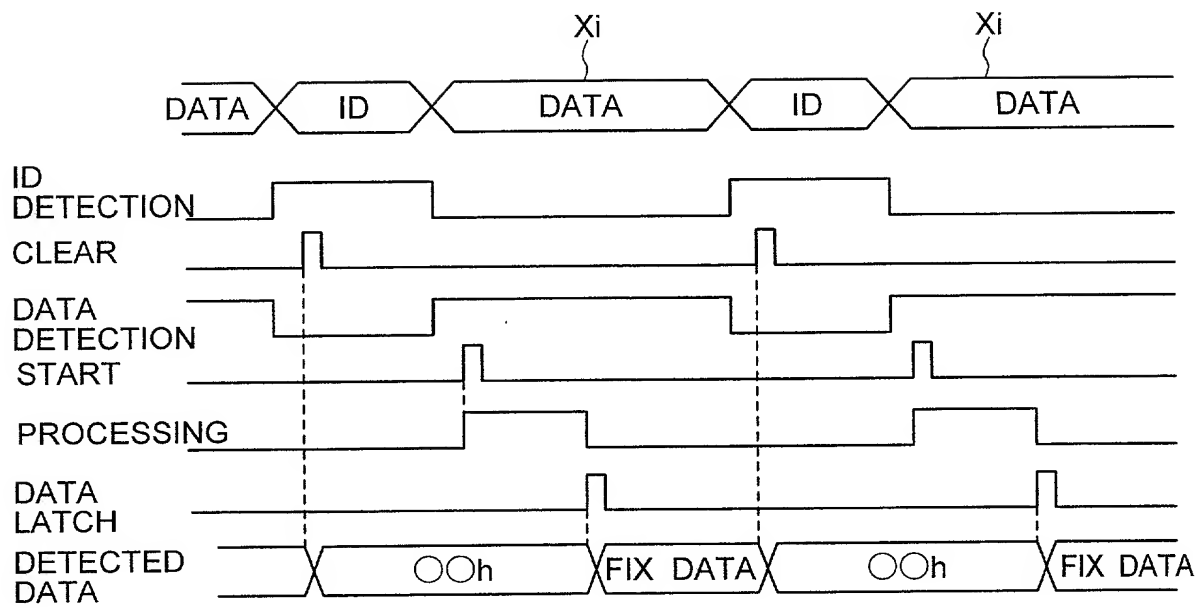


FIG. 16

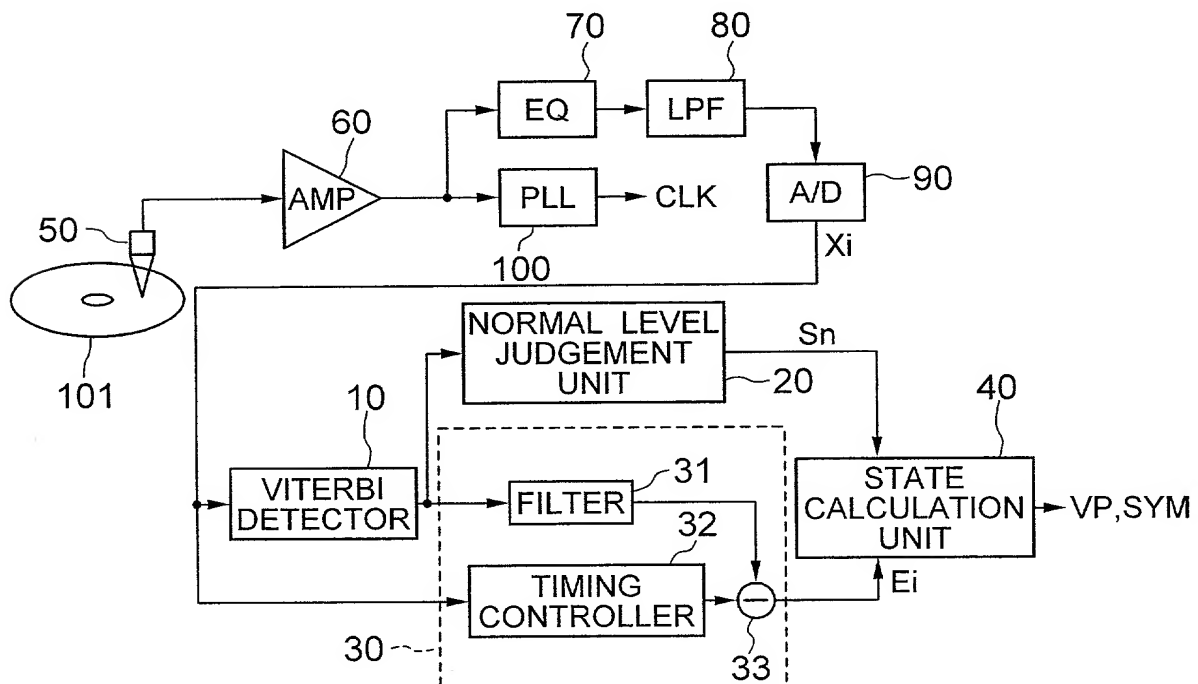


FIG. 17

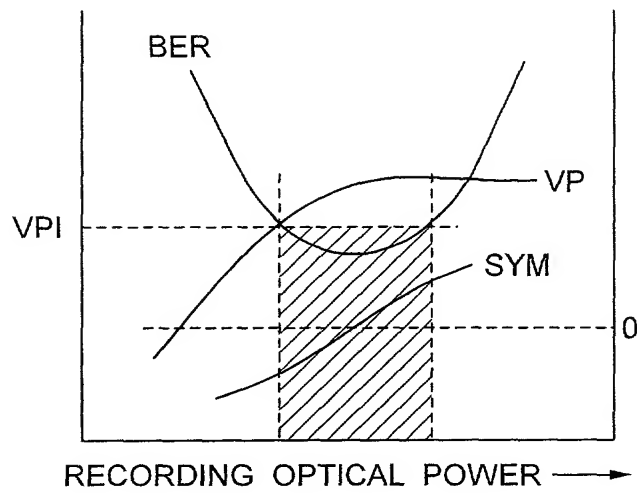


FIG. 18

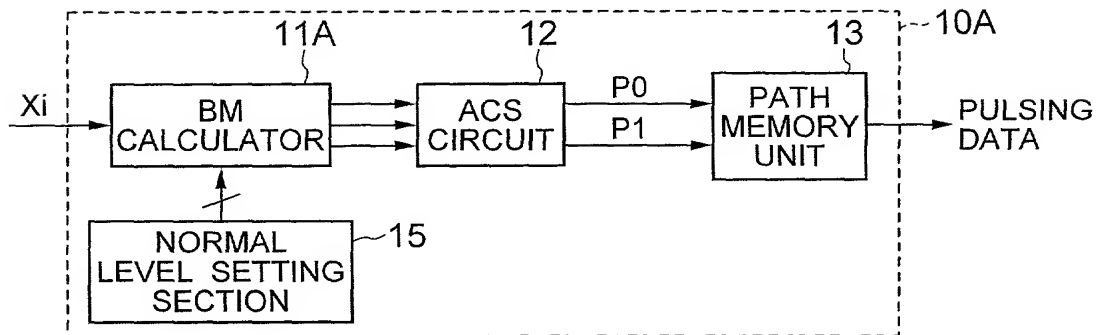
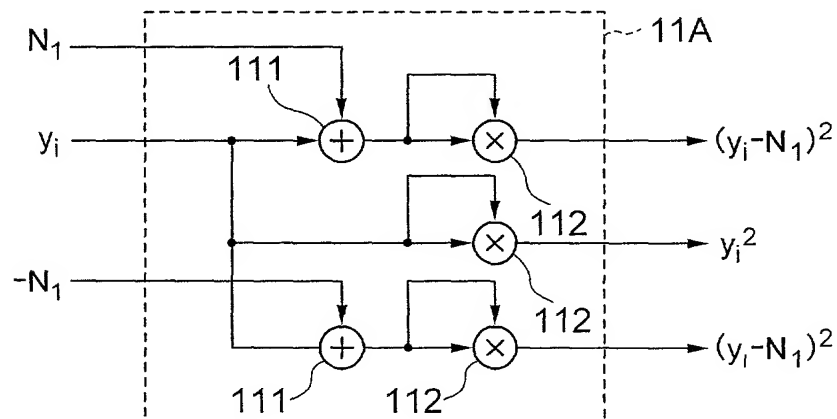


FIG. 19



UNITED STATES PATENT AND TRADEMARK OFFICE
DOCUMENT CLASSIFICATION BARCODE SHEET



**Oath/Declaration, Small Entity,
and Power of Attorney**

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DECLARATION AND POWER OF ATTORNEY FOR PATENT APPLICATION

As a below named inventor, I hereby declare that my residence, post office address and citizenship are as stated below next to my name, and I believe I am the original, first and sole inventor (if only one name is listed below) or an original, first and joint inventor (if plural names are listed below) of the subject matter which is claimed and for which a patent is sought on the invention entitled:

RECORDING STATE DETECTION SYSTEM FOR USE IN A DISK DRIVE

the specification of which (check one)

☒) is attached hereto:

() was filed on _____ as United States Application Number or PCT International Application Number _____

on _____, and was amended on _____ (if applicable).

I hereby state that I have reviewed and understand the contents of the above identified specification, including the claims, as amended by any amendment referred to above. I acknowledge the duty to disclose information which is material to patentability as defined in Title 37, Code of Federal Regulation, §1.56. I hereby claim foreign priority benefits under Title 35, United States Code, §119/365 of any foreign application(s) for patent or inventor's certificate listed below and have also identified below any foreign application for patent or inventor's certificate disclosing the subject matter claimed in their application and having a filing date (1) before that of the application on which priority is claimed, or (2) if no priority is claimed, before the filing date of this application.

Prior foreign Application(s)

Number	Country	Day/Month/Year Filed	Priority Claimed
2000-397828	Japan	27/12/2000	(<input checked="" type="checkbox"/>) Yes () No
_____	_____	_____	() Yes () No
_____	_____	_____	() Yes () No

I hereby claim the benefit under Title 35, United States Code, §120/365 of any United States application(s) listed below and PCT International Applications listed above or below, and, insofar as the subject matter of each of the claims of this application is not disclosed in the prior United States application in the manner provided by the first paragraph of Title 35, United States Code, §112, I acknowledge the duty to disclose information which is material to patentability as defined in Title 37, Code of Federal Regulations, §1.56 which became available between the filing date of the prior application and the national or PCT international filing date of this application.

(Application Number)	Day/Month/Year Filed	Status (Patented, Pending, Abandoned)
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I hereby appoint Donald W. Muirhead, Reg. No. 33,978; Anne E. Saturnelli, Reg. No. 41,290; and David Suhl, Reg. No. 43,169 as attorneys to prosecute this application and to transact all business in the Patent and Trademark Office connected therewith.

Address all telephone calls to Donald W. Muirhead at telephone number (617) 951-6676. Address all correspondence to:

Patent Group
Hutchins, Wheeler & Dittmar
101 Federal Street
Boston, MA 02110

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

Inventor's signature Masaki Nakano  Date 17/12/2001

Full name of sole or first inventor (given name, family name) Masaki NAKANO

Residence Tokyo, Japan Citizenship Japanese

Post Office Address (include zip code) c/o NEC Corporation, 7-1, Shiba 5-chome, Minato-ku, Tokyo, 108-8001 Japan

Inventor's signature Hiromi Honma  Date 17/12/2001

Full name of second inventor (given name, family name) Hiromi HONMA


Residence Tokyo, Japan Citizenship Japanese

Post Office Address (include zip code) c/o NEC Corporation, 7-1, Shiba 5-chome, Minato-ku, Tokyo, 108-8001 Japan

(☒) Additional inventors are being named on separately numbered sheets attached hereto. 108-8001 Japan

DECLARATION AND POWER OF ATTORNEY FOR PATENT APPLICATION

(continued)

Inventor's signature Masaki Hidano  Date 17/12/2001

Full name of third inventor (given name, family name) Masaki HIDANO

Residence Tokyo, Japan Citizenship Japanese

Post Office Address (include zip code) c/o NEC Corporation, 7-1, Shiba 5-chome, Minato-ku, Tokyo,
108-8001 Japan

Inventor's signature _____ Date _____

Full name of fourth inventor (given name, family name) _____

Residence _____ Citizenship _____

Post Office Address (include zip code) _____

Inventor's signature _____ Date _____

Full name of fifth inventor (given name, family name) _____

Residence _____ Citizenship _____

Post Office Address (include zip code) _____

Inventor's signature _____ Date _____

Full name of sixth inventor (given name, family name) _____

Residence _____ Citizenship _____

Post Office Address (include zip code) _____

Inventor's signature _____ Date _____

Full name of seventh inventor (given name, family name) _____

Residence _____ Citizenship _____

Post Office Address (include zip code) _____

Inventor's signature _____ Date _____

Full name of eighth inventor (given name, family name) _____

Residence _____ Citizenship _____

Post Office Address (include zip code) _____